

### REMARKS

The Office Action of March 4, 2009 has been reviewed and the comments therein carefully considered. Claims 13 and 15-24 are pending in this application, of which claims 13 and 23 are in independent form. Claims 13, 15-17 and 20-24 stand rejected under 35 U.S.C. 103(a) for obviousness over U.S. Patent No. 6,552,661 to Lastinger et al. in view of U.S. Patent Application Publication No. 2003/0198271 to Matveev. In addition, claim 18 stands rejected under 35 U.S.C. 103(a) for obviousness over Lastinger in view of Matveev as applied to claim 13 and further in view of U.S. Patent No. 6,617,962 to Horwitz et al. Further, claim 19 stands rejected under 35 U.S.C. 103(a) for obviousness over Lastinger in view of Matveev as applied to claim 18 and further in view of U.S. Patent No. 5,976,038 to Orenstein et al. For the following reasons, these rejections are respectfully traversed.

Claims 13 and 15-22 are directed to a system for localizing sports equipment comprising a means for generating an electromagnetic energy field which is adapted to transmit pulse beams comprising nine pulse streams which are oriented substantially parallel to one another. Claim 23 is directed to a method for localizing sports equipment including the step of generating an electromagnetic energy field formed by one or more pulse beams, where each pulse beam comprises nine pulse streams oriented at least substantially parallel to each other. The electromagnetic energy field is within the UWB, which has a much greater bandwidth than conventional radio frequency (RF) transmissions. In addition, UWB does not use carrier waves but instead uses pulse trains. By dividing the pulse signal into a plurality of parallel pulse streams, and particularly nine pulse streams, Applicants have found that the pulse streams do not have to closely follow one another to increase the data transfer speed. (*See* specification, page 2, line 25 – page 3, line 3) This arrangement also enhances the reliability of the system, allows for less expensive detection means to be used and eliminates the need for error correction systems. (*Id.*)

The Office Action contends that Lastinger teaches a system for localizing articles of sports equipment comprising means for generating a radio frequency energy field formed by one or more pulse streams, at least one detecting means, detection means, and a control unit coupled to the detection means. It is further contended that the means for generating the energy field in Lastinger is adapted to transmit pulse beams of a plurality of pulse streams, though, admittedly, Lastinger fails to teach, disclose, or suggest the use of

UWB, nine pulse streams, or pulse streams that are substantially parallel to one another. (*See* Office Action, page 2) With respect to claim 23, it is asserted that Lastinger suggests a method for localizing sports equipment substantially as defined in claim 23, except for the use of UWB and pulse beams oriented substantially parallel to one another. (*See* Office Action, pages 4-5)

The Office Action then cited Matveev as allegedly teaching the use of UWB and pulse beams comprised of a plurality of pulse streams oriented substantially parallel to one another. The Office Action concludes that one skilled in the art would find it obvious to use the pulse beam of Matveev in Lastinger's system for the benefit of reducing image distortions, noise and glare from oncoming vehicles, thereby providing images with higher quality. (Office Action, page 3)

Initially, Applicants note that certain of the passages of Matveev relied upon in the Office Action may not be properly citable prior art. The present application has an international PCT filing date of April 8, 2004 and claims priority to a Dutch application filed April 15, 2003. The cited Matveev document has a filing date of May 28, 2003 and a publication date of October 23, 2003. This document is a continuation-in-part application of U.S. Patent Application No. 10/157,359, filed on May 28, 2002, which published as U.S. Patent Application Publication No. 2002/0191388 on December 19, 2002. Because of the invention date established by the Dutch priority document, the Matveev document relied on in the Office Action would not qualify as prior art to the extent its subject matter is not supported by the parent Matveev application. A review of the parent Matveev application reveals that the passage relied on in the Office Action as allegedly teaching Ultra Wideband, paragraph 57 of Matveev (US 2003/0198271), suggesting the use of an RIID with a selection bandwidth of between 200 MHz and 1000 MHz, does not appear in the parent Matveev application.

Furthermore, Applicants believe the Matveev document relied on in the Office Action fails to teach, disclose, or suggest the use of UWB. As stated above, Matveev is cited as allegedly teaching the use of UWB and parallel pulse streams. However, Matveev mentions a signal having a band width between 200 MHz and 1 GHz (1000MHz), which is a factor of 5 between the highest and lowest frequency. This is not believed to be typical for a UWB application. Moreover, as discussed in Applicants' specification, UWB allows the transmission of relatively large quantities of digital data per unit time by transmitting

relatively small energy pulses over a relatively broad frequency spectrum. In the U.S., the FCC has authorized the use of UWB in the range of 3.1 to 10.6 GHz. (*See* Wikipedia entry for "Ultra-wideband," <http://en.wikipedia.org/wiki/Ultra-wideband>). This frequency range is considerably different from that range mentioned in Matveev. Matveev also fails to discuss the use of pulsed energy to transmit high amounts of data, and thus it is unlikely Matveev would be viewed by one skilled in the art as relevant to the field of UWB technology, which is primarily directed to high data rate transmission. Thus, it is not believed that Matveev teaches, discloses or suggests the use of UWB.

In addition, one skilled in the art would not consider it obvious to combine Matveev with Lastinger. Matveev is directed to a reduced glare imaging system for automobiles. The Matveev system emits low energy, electromagnetic pulses in the light spectrum. The resulting radiation is scattered by other objects on the road, received, and processed to provide accurate images of the objects. Matveev alleges that the system can reduce the glare observed by oncoming drivers caused by traditional headlight illumination devices. Lastinger, on the other hand, is directed to an RFID locator system in which multiple locator devices work in combination to determine the location of various objects at a given time. Lastinger principally discusses radio frequency communications, with the various locators using antennas for transmitting and receiving signals. Lastinger is not concerned with reducing glare or image distortions, as in Matveev. In fact, the environments in which the Lastinger and Matveev systems are used suggest that the teachings of one are not particularly compatible with the other. Lastinger's system is intended to be used in a facility such as a warehouse or building to locate lost objects or discern the position of objects. Matveev, on the other hand, is intended to be used on the roadway as a way to develop an image of an oncoming car without projecting potentially hazardous levels of light into the eyes of an oncoming driver. One skilled in the art would not think to apply the technology of Matveev to Lastinger because the perceived benefits of the Matveev system, i.e. reduced glare, clearer image reproduction, etc., are not applicable to Lastinger.

Accordingly, Applicants submit that the outstanding rejection of claims 13, 15-17 and 20-24 based on Lastinger in view of Matveev should be reconsidered and withdrawn.

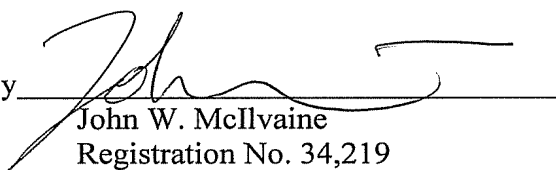
Claim 19 stands rejected under 35 U.S.C. 103(a) for obviousness over Lastinger in view of Matveev as applied to claim 13 and further in view of U.S. Patent No.

6,617,962 to Horwitz. However, for the reasons discussed above, Lastinger in view of Matveev does not teach, disclose or suggest the invention defined in claim 13. Horwitz does not cure these deficiencies as Horwitz is cited only as allegedly suggesting the use of a chip as a disruption means. Accordingly, claim 18 is also patentable over the cited documents of record.

Claim 19 stands rejected under 35 U.S.C. 103(a) for obviousness over Lastinger in view of Matveev and Horwitz as applied to claim 18 and further in view of U.S. Patent No. 5,976,038 to Orenstein et al. However, for the reasons discussed above, Lastinger in view of Matveev does not teach, disclose or suggest the invention defined in claim 13, nor does the combination of Lastinger, Matveev and Horwitz teach, disclose or suggest the invention defined in claim 18. Orenstein does not cure these deficiencies. Orenstein is cited as allegedly teaching the use of a disrupting means formed as a coating. Accordingly, it is submitted that claim 19 is also patentable over the cited documents of record.

For the foregoing reasons, Applicants submit that the pending claims are patentable over the cited documents of record and are in condition for allowance. Accordingly, reconsideration of the outstanding rejections and allowance of pending claims 13 and 15-24 is respectfully requested.

Respectfully submitted,  
THE WEBB LAW FIRM

By   
John W. McIlvaine  
Registration No. 34,219  
Attorney for Applicants  
436 Seventh Avenue  
700 Koppers Building  
Pittsburgh, PA 15219  
Telephone: (412) 471-8815  
Facsimile: (412) 471-4094  
E-mail: webblaw@webblaw.com